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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/674,045

09/29/2003

Jung-Tao Liu

LIU-24/2100.004200

2585

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10/20/2006

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EXAMINER

ALAM, FAYYAZ

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/674,045

Applicant(s)

LIU, JUNG-TAO

Examiner

Fayyaz Alam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 - 13 and 17 - 25** are rejected under 35 U.S.C. 102(b) as being anticipated by **Blackeney II et al. (U.S. Patent # 5,267,261)**.

Consider **claims 1 and 17**, Blackeney II et al. (hereinafter Blackeney) disclose a method of controlling a mobile device and communication system, where a pilot signal has synchronization information (see col. 6, lines 12 - 14). The communication environment comprises of base stations (12, 14, &16) and a mobile station (18) (see fig. 1). The said base stations are capable of transmitting pilot signals (hereinafter also known as synchronization signals) and the mobile station is capable of monitoring the synchronization signals while in communication with at least one of the base stations (see col. 3, lines 56 - 59). The at least one base station that is in communication with the mobile station is synchronized since it is providing transmit and receive functions to and from the network (read as communicating using first synchronization signal; see col. 3, lines 45 - 59). When there exists more than one base stations in the active set of the mobile station, the mobile station is in hand off period while still monitoring pilot signals and in communication with at least one base station (read as communicating using signals synchronized with the first synchronizing signal during a hand off period;

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see col. 3, lines 45 - 68; col. 4, lines 31 - 35). When there is only one remaining base station in the active set the mobile station is in communication with that base station and therefore, is no longer in hand off period (read as communicating using signals synchronized with a second synchronizing signal after the hand off period; see col. 4, lines 31 - 35).

Consider **claims 2 and 18** as applied to claims 1 and 17, Blackeney discloses synchronization signals being transmitted from the base stations in the active set and received at the mobile station, where the mobile station is in communication with at least one base station (read as first synchronizing signal is delivered from a first base station to mobile device; see col. 3, lines 45 - 68).

Consider **claims 3 and 19** as applied to claims 1 and 17, Blackeney discloses when there is only one base station remaining in the active set the mobile station is in communication with that base station and is therefore no longer in the hand off period and is inherently synchronized with the one remaining base station (read as the second synchronizing signal is delivered from a second base station to a mobile device see col. 4, lines 31 - 35).

Consider **claims 4 and 20** as applied to claims 1 and 17, Blackeney discloses the mobile station monitors and receives pilot signals (read as signals reflecting parameters of communication) from multiple base stations while in communication with at least one base station (read as receiving signals reflecting parameters of communication between a mobile device and a second base station; see col. 3, lines 45 - 68).

Consider **claims 5, 6, and 21** as applied to claims 4 and 20, respectively, Blackeney discloses communication between a mobile station and a system controller via said at least one base station in communication where when a pilot signal of a base station exceeds a preset threshold it is eventually added to an active set and all the base stations in the active set are allowed to communicate with the mobile station. The mobile station is now in hand off period since there are more than one base stations in the active set (read as the hand off period is initiated in response to the parameters of communication between the mobile device and the second base station and the second base station is added to an active set associated with the mobile device, wherein each base station in the active set is permitted to communicate with the mobile device; see col. 3, lines 45 - 68; col. 4 lines 31 - 35).

Consider **claim 7** as applied to claim 6, Blackeney discloses the system controller communicates the active set to the mobile station (see col. 3, lines 45 - 68).

Consider **claims 8, 9, 10, 22, and 23** as applied to claims 1, 8, 9, 17 and 22, respectively, Blackeney discloses the at least one base station used for communication is in the active set where the pilot signals (read as receiving signals reflecting parameters of communication) of all the base stations are monitored and therefore when the pilot signal of that at least one base station (read as first base station) drops below a preset threshold, communication with that at least one base station (read as first base station) is terminated and it is removed from the active set while communication with remaining base stations in active set continues. If there were only two remaining base stations including the at least one base station (read as first base

station) in the active set, communication is established with the remaining base station which results in a termination of the hand off period (read as receiving signals reflecting parameters of communication between a mobile device and a first base station and the hand off period is terminated in response to the parameters of communication between the mobile device and the first base station and the first base station is removed from an active set associated with the mobile device, wherein each base station in the active set is permitted to communicate with the mobile device; see col. 3, lines 45 - 68; col. 4 lines 1 - 14).

Consider **claim 11** as applied to claim 10, Blackeney discloses communicating the active set to the mobile station (see col. 4, lines 15 - 30).

Consider **claims 12 and 24** as applied to claims 1 and 17, Blackeney discloses communication of at least one base station (read as first base station) with the mobile station, therefore, the mobile station is synchronized with said base station (read as first synchronized signal). When there exists more than two base stations in the active set, the communication to the network is always carried out through the at least one base station from the mobile station. Therefore, communication to system controller in regards to adding base stations (read as second and third base stations) to an active set, based on pilot signal strength is carried out by the at least one base station (read as first base station) and thus first synchronizing signal is used during a hand off period (see col. 3, lines 45 - 68).

Consider **claims 13 and 25** as applied to claims 12 and 24, Blackeney discloses removing base stations from the active set and terminating communications with the

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removed base stations once pilot signals from base stations drop below a preset threshold. Therefore, once all the base stations are removed from the active set except for one, the hand off period is terminated and communication with other base stations is terminated as well and the mobile station is communicating using synchronizing signal from the last remaining base station (read as communicating from the second base station to the mobile device using signals synchronized with a second synchronizing signal after the hand off period further comprises communicating from the second base station to the mobile device using signals synchronized with the second synchronizing signal in response to communications with both the first and third base stations being ended; see col. 4, lines 1 - 35).

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 14, 15, 26, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Blackeney II et al. (U.S. Patent # 5,267,261)**.

Consider claim 14, 15, 26, and 27 as applied to claims 13, 25, and 24, respectively, Blackeney fails to disclose communicating from the second base station to the mobile device using signals synchronized with the second synchronizing signal in response to communications with the first base station and then the third base station being ended and communicating from the second base station to the mobile device using signals synchronized with the second synchronizing signal in response to communications with the third base station and then the first base station being ended.

Nevertheless, an active set comprise of base stations for potential hand off during a hand off period. Removing and terminating communication with a particular base station is a matter of what sort of priority the base stations are arranged in, in the active set. They can be arranged according to the strongest pilot signal, time of reception, etc. Therefore, removing a base station from an active set and terminating communications with it first as opposed removing and terminating communications with another base station is merely a matter of design choice according to the prioritization of the active set.

Therefore, it would have been an obvious matter of design choice since the claims as disclosed does not solve any stated problem.

**Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Blackeney II et al. (U.S. Patent # 5,267,261)** in view of **Sekine et al. (U.S. Application # 2001/0024429)**.



Consider **claim 16** as applied to claim 1, Blackeney fails to disclose a second base station retaining in memory the first synchronizing signal.

In the related field of endeavor, Sekine et al. disclose in a soft handover procedure transmitting a phase difference offset (OFS 1) (read as first synchronization signal) to base station (104) (read as second base station). Therefore, the OFS 1 signal would be stored in the base station (104) (read as a second base station retaining in memory the first synchronizing signal; [0069 - 0073]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Blackeney with the teachings of Sekine et al. in order to provide efficiency in time by fast acquisition of synchronization information and avoid loss of data with unsynchronized base stations.

### ***Conclusion***

4. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

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5. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1102. The Examiner can normally be reached on Monday-Friday from 9:30am to 7:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Fayyaz Alam*

October 12, 2006

EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

*Ed Orgad* 10/16/06